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ABSTRACT

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RESEARCH BULLETIN

EDUCATING DISADVANTAGED URBAN CHILDREN IN SUBURBAN SCHOOLS: AN EVALUATION

S. M. Zdep

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Educational Testing Service
Princeton, New Jersey
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S. M. Zdep

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Abstract

A one-year experimental program that transported a total of 38 "volunteer" disadvantaged city children to schools in a nearby suburban community was evaluated in grades 1 and 2. Twenty-six of the 38 children were in a total of 12 different classes at these two grade levels. At the conclusion of the program, transported first graders displayed significantly higher average gains than did counterparts who remained in the city school in reading, mathematics, and listening skills. Among second graders, achievement mean gains for the transported group did not differ significantly from those of the counterpart group. Suburban children in classes containing city youngsters displayed no measured detrimental effects on achievement, when compared to similar classes without city children. In general, year-end affective measures indicated that most groups of students preferred integrated classes that were mostly white, and they also felt these classes were among the smartest.

Educating Disadvantaged Urban Children in Suburban Schools: An Evaluation[1]

S. M. Zdep[2]

Educational Testing Service

Our cities today face many problems, but one of the most pressing ones involves the schooling of ghetto children. The children in inner city schools usually come from low SES families; a high proportion of them are black, and they have been termed "educationally disadvantaged" for a number of reasons.

Some of these educational disadvantages have been documented most vividly in the recent Coleman Report on Equality of Educational Opportunity (Coleman et al., 1966). Coleman pointed out that, on standardized achievement tests, Negroes from the metropolitan Northeast show a grade level gap of 1.6 years in sixth grade, 2.4 years in ninth grade, and 3.3 years in twelfth grade. Much of this lack of achievement has been attributed to language difficulties of disadvantaged children. Bernstein (1961) presented evidence indicating that lower class children have restricted language patterns which tend to confine thinking to a relatively low level of repetitiveness. Other investigators (Ausubel, 1964; Gordon, 1964; Riessman, 1962) discovered that, in general, low SES children have problems in reasoning and abstract thinking which also depend on language development.

Another difficulty for disadvantaged children lies in the area of motivation. Gordon and Wilkerson (1966) reported that a number of investigators found that these children are less motivated and have lower aspirations for academic and social achievement than do their more advantaged peers. Furthermore, this depressed level of aspiration seems to be related to the child's perceptions of the opportunities and rewards that are open to him in society.

Various attempts have been made to close the educational gap that exists between disadvantaged children and their middle class counterparts. Perhaps the greatest impetus in this direction was provided by the Elementary and Secondary Education Act (ESEA) of 1965 which provided financial support for various forms of compensatory education. Many of the educational programs undertaken under the auspices of the Act focus on the establishment of remedial reading classes, improvement of library resources, teacher training programs, etc.

In other cases, innovative educational programs have been developed. One such program involved the bussing of ghetto children to predominantly white, middle class schools in surrounding suburban communities.

Buskin (1967) reported preliminary results on three such bussing programs that were initiated in the metropolitan Northeast. Collectively, evidence from these pilot programs seems to indicate that city-to-suburb bussing can work, that it benefits city children, and that it does not harm suburban children.

Based on this initial promising evidence, a large eastern city (Center City) and one of its suburban satellites (Suburbia) entered into an agreement which called for the "sharing of educational opportunity." Under the terms of the agreement, a total of 38 city children were to be transported, on a daily basis, to schools in Suburbia for a one-year trial period. It was decided to build upon the experiences of earlier programs (see Mahan, 1968), and to provide for a comprehensive evaluation of the program as well. Not only did the administrators of the program want to provide city children with an enriched educational program and environment, but they wanted to study resultant educational and behavioral outcomes both for city children and for children who already attended suburban schools.

Method

Students

Students transported to Suburbia were selected randomly, by grade level, from a group of 170 children residing in a single school district whose parents had indicated a willingness to have their children participate in the program. A total of 38 children in grades one through five (all were Negro) were selected in this manner by Center City school officials and a representative of the State Department of Education (actually, student numbers were drawn by grade level from a container). Since 26 of the 38 children were in grades one and two, it was decided to focus the evaluation at these two grade levels.

A matched group of counterparts who would remain at the inner city school was selected from the remaining children whose parents had given permission for them to participate in the program. In anticipation of a high student turnover rate in the city school, a larger number of counterparts was selected. This selection of counterparts was done by ETS personnel without any personal knowledge of the students. In general, counterparts not only came from the same grade levels, but they were similar to the transported children in terms of age and sex. When the selection had been completed, the vice-principal of the city school commented that, to her knowledge, the children in both groups were representative of neighborhood SES and that neither group contained children who were considered to have behavior or emotional problems.

In Suburbia, a total of 19 first- and second-grade classes, located in four elementary schools, participated in the program. City children were

assigned to 12 of these classes on the basis of existing vacancies. The remaining classes were used for comparison and will be referred to as Control classes. No attempt was made to match teachers to Experimental or Control classes.

In Center City, a total of six first- and second-grade classes, containing all the counterparts, participated in the evaluation. Tables 1 and 2 present a listing of all participating classes.

Insert Table 1 about here

Insert Table 2 about here

Educational Treatments

Each school day city children were transported to Suburbia by bus, accompanied by a teacher aide. Depending on weather and traffic conditions, the trip took 35-45 minutes each way. When the children arrived in Suburbia, they were met by a supplemental teacher whose task it was to help them make a smooth transition into suburban classrooms. The supplemental teacher was also Negro, and her duties consisted of giving remedial help to those children needing it and, in general, working on a cooperative basis with suburban teachers.

The community of Suburbia is located approximately five miles from Center City. It occupies an area of 2.8 square miles and contains a population of approximately 15,000. Most of its residents are white, and a high proportion are high school and college graduates. Traditionally, more

than 80% of Suburbia High School graduates continue their education in two- and four-year colleges and other institutions of learning.

The feeder district for the Center City school is in an area of transition. A decade ago it was predominantly white middle class. Today, a vast majority of its residents are black and low SES. Presently, the city school suffers from a physical deterioration typical of many inner city schools. Make-shift classrooms have been added and classes are overcrowded.

First grade children were on split-session. The first session met between 8:30-12:30, and the second session met between 11:30-3:30. Children from the first session had to move to other classrooms at 11:30 in order to provide space for incoming children from the second session.

In Suburbia, for grade one only, the schedule provided for reading instruction with a reduced pupil to teacher ratio of 11:1, but in Center City, teachers had two or three times as many pupils for reading. Contemporary mathematics was presented in Suburbia, while traditional mathematics was taught in the Center City school.

It should also be pointed out that, beginning in February of the school year, a mathematics specialist who worked with both children and teachers was added to the staff of the city school. There was no counterpart to this teacher in Suburbia schools.

Approximately 40 Suburbia families volunteered to serve as "host families" for the city children. Under this plan, each of the city children had lunch at the home of one of his suburban classmates during the school day.

Evaluation Procedure

During the first week of school, Suburbia first-grade teachers administered the Metropolitan Readiness Test, Form B (Hildreth, Griffiths & McGalivran, 1966) to

their classes as part of a general testing program. Two weeks later ETS personnel and a Suburbia Teaching Specialist administered ETS Cooperative Primary Achievement Tests (Form A, 1965, 1967) in reading, mathematics, and listening skills to second-graders. In addition, both first- and second-graders completed an experimental attitude inventory.

Pretesting in Center City was carried out during the third week of school by ETS personnel using the same sets of instruments. Besides the slight differences in time of pretesting at both locations, another variation was present. In Suburbia, the Metropolitan Readiness Test was administered to small groups of first-graders in three sittings. In Center City the same test was administered to the entire class in two sittings. Two of the city first-grade classes completed the test on successive days, but the remaining city class completed it in a single day, with the benefit of a 10-minute break halfway through the test.

Posttesting was conducted simultaneously in Suburbia and Center City during the third week of May. The achievement tests involved were appropriate level ETS Cooperative Primary Tests in reading, mathematics, and listening. No class was given more than one achievement test on a given day. In addition, the attitude questionnaire was readministered. In Suburbia, classroom teachers administered the achievement tests, but the Suburbia Teaching Specialist administered all of the attitude inventories. In Center City all posttesting was conducted by ETS personnel.

Table 3 presents a summary of the measures used in pre- and posttesting.

Insert Table 3 about here

All measures, except the attitude inventory (In the Primary School), listed in Table 3 were standardized tests having been developed for the particular grade level involved. The interested reader may refer to the appropriate manuals referenced for technical data on the tests. In the Primary School was an experimental paired-comparison type attitude inventory specifically adapted to the present study. It consisted of thirty 8 1/2" x 14" pages, each page containing two pictures of children in a classroom. The pictures were identical in every respect (three girls and three boys were depicted), except for racial composition as reflected by skin shading. The pictures contained either zero, two, four, or six black students. In the racially-mixed pictures, the shading was applied to equal numbers of boys and girls, and their positions varied from picture to picture. Each picture was paired with itself and all others in three separate sets of discriminations. The discriminations (in blocks of 10 pairs) were (1) Which class would you rather be in? (2) Which class do you think is smarter? (3) Which class do you think gives the teacher more trouble? The order of presentation of pictures was counterbalanced over the 30 sets involved.

In group situations, the children completed the attitude inventory by marking the picture of their choice in response to the question read to them. A practice item was included, and each page was identified by a drawing (as well as a page number) in the upper right corner of each page to insure that each child kept his place.

In addition to the testing program, other data collected included the following: A specially adapted version of the Classroom Operational Problems Check List (Educational Testing Service, 1968) (pre and post), a questionnaire for Suburbia host parents (post), a questionnaire for the transported

children (post), a questionnaire for the parents of the transported children (post), and attendance data for transported children and their counterparts.

The Classroom Operational Problems Check List (adapted version) contained 92 items listing various types of problems encountered by teachers in the classroom. Teachers were to check only those that they faced in class.

Suburbia host parents completed a questionnaire in May, and all questionnaires, with the exception of those obtained in one of the Suburbia schools, were returned directly to ETS. In the case of the exception, the questionnaires were returned to the school and then forwarded to ETS. No differences in response patterns were noted between these questionnaires and those sent directly to ETS.

The questionnaires for transported students and their parents were completed by the supplemental teacher who interviewed both students and parents on separate occasions near the end of the school year.

Method

Initial analyses, carried out separately for each grade level, compared the achievement of transported children to that of their counterparts who remained at the inner city school. Unadjusted means and standard deviations for achievement tests are presented in Tables 4 and 5.

Insert Table 4 about here

Insert Table 5 about here

Using a covariance adjustment, posttest scores were adjusted on the basis of all pretest results. At the first-grade level, the covariates were Word Meaning, Sentences, Information, Matching, Numbers, and Copying. At the second-grade level the covariates were Reading 12A, Mathematics 12A, and Listening 12A.

The analyses revealed that there were highly significant posttest achievement differences in favor of the transported children at the grade one level. These significant differences were found in each of the areas of reading, mathematics, and listening skills. The analyses further indicated that there were no significant achievement differences between boys and girls and that the sex-treatment interactions were also nonsignificant. A summary of the analyses is presented in Table 6.

Insert Table 6 about here

Similar analyses for transported grade two children revealed that, although the transported group of children scored higher than their counterparts on two of the three posttests, none of the differences were statistically significant. The treatment effects in each achievement area were as follows: reading ($F = 1.20$, d.f. 1, 19, $p < .29$), mathematics ($F = 0.18$, d.f. 1, 16, $p < .68$), listening ($F = 2.31$, d.f. 1, 18, $p < .15$). The main effects of sex and the sex-treatment interactions were also nonsignificant.

In order to determine the effects of the program on the achievement of suburban children, suburban children in Experimental classes (those containing city children) were compared to suburban children in Control classes (those not containing city children). Unadjusted means and standard deviations for both grade levels appear in Tables 7 and 8.

Insert Table 7 about here

Insert Table 8 about here

Analyses of covariance at each grade level, using the pretests as multiple covariates, revealed that there were no significant achievement differences between suburban children in Experimental classes and children in Control classes. The educational treatment effects at the first-grade level were as follows: reading ($F = 2.09$, d.f. 1, 145, $p < .15$), mathematics ($F = 0.73$, d.f. 1, 145, $p < .40$), and listening ($F = 0.75$, d.f. 1, 145, $p < .39$). At the second-grade level the treatment effects were: reading ($F = 0.01$, d.f. 1, 177, $p < .96$), mathematics ($F = 1.50$, d.f. 1, 177, $p < .22$), and listening ($F = 0.03$, d.f. 1, 177, $p < .87$). The only significant effect encountered was due to sex at the first-grade level in which girls surpassed boys in reading ($F = 15.19$, d.f. 1, 145, $p < .001$).

In an effort to examine some of the "side effects" of such an experimental educational program, the paired comparison affective results were scaled using assumptions based on Thurstone's Case V (Guilford, 1954, pp. 154-177).

Before analyzing the raw data, it became obvious that some of the children who responded to the attitude instrument were patterning their responses (marking the left or right picture exclusively) and not responding to differences in skin shading. This could have meant that they had no clear racial preferences, that they were unwilling to express racial preferences, that they misunderstood the directions, or that they failed to

spot the differences in racial composition of the stimulus pictures. Whatever the reason for this patterning of responses, it was clear that the responses were not measures of attitude, and they were therefore removed prior to the analysis. On the pretest, 20% of the responses were not usable, but this decreased to only 10% on the posttest, probably reflecting both learning and maturation. The usable data, when tested for "goodness of fit" to Case V assumptions, yielded p-values in excess of .99.

Since each racial mix was also compared with itself, it was possible to obtain an estimate of right- and left-handed preference in responding. These estimates were then used to adjust the proportions of preference of one racial mix over another in the matrix P (proportion matrix). This resulted in a presumably better measure of affect towards racial mixes.

The affective results were then scaled in relation to the picture of the all-black class that was given a point value equal to zero. The data presented in Table 9 consist of scaled 95% confidence intervals for the mean affective values of various groups of students.

Insert Table 9 about here

There was some indication that, in September, bussed children wanted to be in mostly-white classes, but by May they chose white classes. In addition, bussed children initially considered mostly-white and white classes to be smartest, but by May they felt that racial mix had little relationship to class ability.

At the end of the school year, suburban first- and second-graders in Experimental classes showed a slight preference for mostly-white and white

classes, and they also felt these classes were smartest. Suburban first graders in Control classes were not as explicit in registering their preferences, but suburban second graders in Control classes expressed attitudes not differing appreciably from those of Suburban children in Experimental classes.

Class racial mix and disruptiveness were slightly related, according to year-end ratings by suburban second graders in both Experimental and Control classes. In both cases, a class was perceived as becoming somwhat more troublesome as the number of blacks increased. However, suburban first graders saw little relationship between class disruptiveness and racial mix of that class. On this same discrimination in May, bussed students, for some unexplained reason, felt that a mostly-black class was far better behaved than black, white, or mostly-white classes.

At the beginning and end of the school year teachers completed a 92-item questionnaire listing various types of problems faced by teachers in the classroom. The most frequently checked problems were (1) concerned about students' study habits, (2) underachievement of many students, (3) teaching those who do not want to learn, (4) frustrated by wanting all my kids to learn, and (5) being impatient with my students. The average number of problems checked by suburban teachers are presented in Table 10.

Insert Table 10 about here

Eighteen out of 19 suburban teachers completed the pre-questionnaire, and 15 out of 19 completed the post-questionnaire. Although all teachers were assured complete anonymity, three teachers of Experimental classes did

not return post-questionnaires, even after repeated follow-up attempts. The fourth missing post-questionnaire was due to a teacher change during the school year. An inspection of the average number of problems checked in Table 8 reveals that teachers of Experimental classes checked far fewer problems than did teachers of Control classes. It appears doubtful that data from the missing questionnaires could have reversed this trend, so that a conservative conclusion drawn at this time would state that teachers of classes containing city youngsters encountered no more difficulty (and probably less difficulty) than did teachers of classes containing only suburban children.

Attendance data for the September-May period revealed that grade one transported children attended school 88.0% of the time (grade one counterparts attended 89.2%). Transported grade two children attended 91.7% of the time (grade two counterparts attended 89.2%). The attendance comparability between transported children and their counterparts stands in marked contrast to an earlier project reported by Mahan (1968) in which transported children had lower attendance rates. Mahan attributed the lower attendance he found to difficulties associated with the long bus trip and occasional adverse weather conditions.

At the end of the year the transported children were interviewed by the supplemental teacher who used a structured questionnaire. The results indicated that 68% liked being bussed to the suburban school, 5% would rather have gone to the city school, and 27% stated it made no difference to them where they attended school.

The parents of the transported children were also interviewed by the supplemental teacher. A total of 91% stated that they would continue to send

their children to Suburbia if the program continued. Nine percent of the parents stated they would not send their children because of adverse travel conditions during winter.

Host parents responded to their questionnaire by overwhelmingly endorsing the program. Eighty percent reported they were in favor of the program, 17% reported mixed feelings, and the remaining 3% stated that they had little basis for an opinion. None of the host parents checked the response category indicating they held negative feelings toward the program.

Discussion

A number of important implications emerge from the results of this evaluation. First of all, among transported children who were volunteers, first-graders significantly outperformed their counterparts in each of the measured achievement areas of reading, mathematics, and listening skills. The present design, however, does not permit us to attribute these gains to specified aspects of the treatment. At the second-grade level, the average achievement gains of transported children were not significantly greater than those of their counterparts. These findings lend considerable support to those (e.g., Gordon & Wilkerson, 1966) who have stressed <u>early</u> intervention in the lives of disadvantaged children in order to provide the greatest educational benefits.

At the second-grade level, although the mean differences did not reach the p_{05} level, the average gains for the transported group were slightly higher than the counterpart group in reading and listening skills, but slightly <u>lower</u> in mathematics. In attempting to interpret this <u>pattern</u> of scores, it should be remembered that transported second-graders were con-

fronted with a modern mathematics program after having been exposed to conventional mathematics in first grade. This consideration, together with the fact that a math specialist was retained at the city school midway in the school year, perhaps might shed some light on the apparent reversal in the second-grade math mean scores.

In addition, two of the major findings in this evaluation support conclusions drawn by Coleman et al. (1966). These conclusions as stated in the Coleman Report are: (1) a poor black child will benefit more from attending school with (white or black) middle class children than he would by attending school with poor (white or black) children, and (2) a black child, being more sensitive to peer influences, will benefit in an integrated class with middle class whites, while the white children would suffer very little. Although support was generated for these conclusions, one should keep in mind that the proportion of transported children in any suburban class was quite small. Therefore, attempts to generalize should be confined to mixed classes of similar proportions.

Other measured effects of the one-year experimental program revealed that suburban students preferred the integrated classes that were mostly white; they felt that these classes may have been brighter than other classes, and that they considered classroom disruptiveness to have little relationship to the number of blacks in the class.

Transported children, for the most part, expressed positive feelings toward the program on affective measures, in the year-end interview, and by their daily attendance. In addition, their parents, as well as suburban host parents, indicated that they felt the program had been a success.

In conclusion, it should be pointed out that, although the one-year program might be considered a success from an educational standpoint, it cannot be so considered from a community standpoint. Due to considerable opposition by groups in Suburbia, the program was abandoned. This would indicate that the success of future programs such as this depends not only on the educational program and the attitudes of people directly involved in the program, but also on the attitude of the general community as well.

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Footnotes

[1]The author wishes to express his appreciation to F. Reid Creech for the statistical analyses and to Diane Joyce who assisted in the formulation and implementation of the evaluation.

[2]S. M. Zdep currently is Director of Research, Girl Scouts of the U.S.A., 830 Third Ave., New York 10022.

Table 1

A Listing of Suburbia Participating Classes

	Class	No. Transported Children	Total No. Children
Grade 1	A	2	22
	B	2	22
	C	2	22
	D	2	19
	E	3	19
	F	3	19
	G	0	19
	H[a]	0	23
	I[a]	0	20
Grade 2	A	2	21
	B	2	22
	C	2	22
	D[a]	2	19
	E[a]	2	21
	F[a]	2	22
	G	0	22
	H	0	23
	I	0	23
	J	0	22

[a]Denotes a racially-mixed class containing 1-3 Suburbia Negro students. None of the other classes contained Negroes who resided in Suburbia.

Table 2

A Listing of Center City Participating Classes

	Class	No. of Counterparts[a]	Total No. Children[b]
Grade 1	A	4	31
	B	7	23
	C	6	33
Grade 2	A	7	25
	B	5	21
	C	4	21

[a]Total number of counterparts selected.

[b]Number of children who took pretest.

Table 3

Measures Used in the Testing Program

Title of Instrument	No. of Items	Administration Time (approx.)	Date Administered	Grade Level Involved
Metropolitan Readiness Tests, Form B (Harcourt, Brace & World, Inc., 1966)				
Word Meaning	19	60 minutes total	Sept. 1968	Grade 1
Sentences	14			
Information	14			
Matching	19			
Numbers	24			
Copying	10			
Cooperative Primary Tests (Educational Testing Service, 1965)				
Listening 12A	50	35 minutes	Sept. 1968	Grade 2
Mathematics 12A	55	50 minutes	May 1969	Grade 1
Reading 12A	50	35 minutes		
Listening 23A	50	35 minutes	May 1969	Grade 2
Mathematics 23A	55	50 minutes		
Reading 23A	50	35 minutes		
In the Primary School, Experimental (Attitude) (Educational Testing Service, 1968)	30	25 minutes	Sept. 1968 & May 1969	Grades 1 & 2

Table 4

Unadjusted Mean Scores and Standard Deviations for Grade One Transported Children and Their Counterparts

	Transported Children			Counterparts		
Tests Used	N	M	S.D.	N	M	S.D.
Metropolitan Pretests						
Word Meaning	13	7.77	1.31	14	7.00	2.67
Listening	13	8.00	2.08	14	8.14	2.59
Matching	13	5.31	2.43	14	4.14	2.72
Alphabet	13	6.92	3.34	14	6.78	3.72
Numbers	13	6.62	2.37	14	7.85	3.00
Copying	13	4.46	2.37	14	5.78	4.14
Total	13	39.08	7.55	14	39.71	14.63
Posttests						
Reading 12A	13	22.85	5.40	14	13.00	3.78
Math 12A	13	34.54	5.80	10	26.90	6.33
Listening 12A	13	31.38	5.08	14	25.36	5.68

Note.--One transported grade one student left the program due to relocation during the school year.

Table 5

Unadjusted Mean Scores and Standard Deviations for Grade Two Transported Children and Their Counterparts

	Transported Children			Counterparts		
Achievement Tests	N	M	S.D.	N	M	S.D.
Pretests						
Reading 12A	12	14.50	8.76	15	16.00	4.76
Math 12A	12	26.33	6.13	15	26.33	6.47
Listening 12A	12	24.42	7.10	15	25.00	5.29
Posttests						
Reading 23A	12	22.92	8.59	15	20.53	7.12
Math 23A	12	24.50	5.25	12	25.33	5.62
Listening 23A	11	27.73	6.40	15	24.27	3.77

Table 6

Summary of Analyses of Covariance on Reading, Mathematics, and Listening Scores for Transported Grade One Children and Their Counterparts

Source	d.f.	M.S.	F	p
Reading				
Bussing	1	496.41	18.80	.001
Sex	1	2.00	0.08	.787
B x S	1	1.75	0.07	.800
Within Cells	17	26.41		
Mathematics				
Bussing	1	312.69	13.54	.003
Sex	1	44.42	1.92	.189
B x S	1	1.84	0.08	.782
Within Cells	13	23.09		
Listening				
Bussing	1	210.88	9.78	.006
Sex	1	0.52	0.02	.878
B x S	1	44.29	2.05	.170
Within Cells	17	21.57		

Table 7

Unadjusted Mean Scores and Standard Deviations for Grade One Suburban Children in Experimental and Control Classes

Tests Used	Experimental Class Children (N = 90)		Control Class Children (N = 54)	
	M	S.D.	M	S.D.
Metropolitan Pretests				
Word Meaning	10.23	2.46	10.55	2.27
Listening	10.84	2.63	11.43	2.38
Matching	8.76	3.26	10.00	2.76
Alphabet	10.26	4.10	10.91	3.53
Numbers	12.32	4.22	13.08	4.05
Copying	7.82	2.95	7.87	3.13
Posttests				
Reading 12A	25.18	8.68	24.47	8.12
Math 12A	38.57	6.87	38.79	6.64
Listening 12A	37.18	5.58	37.58	5.93

Table 8

Unadjusted Mean Scores and Standard Deviations for Grade Two Suburban Children in Experimental and Control Classes

	Experimental Class Children (N = 96)		Control Class Children (N = 79)	
Achievement Tests	M	S.D.	M	S.D.
Pretests				
Reading 12A	25.74	9.38	26.52	9.63
Math 12A	38.64	6.94	38.12	6.27
Listening 12A	36.98	5.22	34.59	6.30
Posttests				
Reading 23A	29.71	8.61	29.84	10.01
Math 23A	34.53	8.69	33.27	7.11
Listening 23A	35.87	5.85	35.34	5.13

Table 9

Paired Comparison Scaled Affective Values for Various Student Subgroups[a]

Discrimination[b]	% Black	95 Percent Confidence Intervals																	
		Grades 1 & 2 Bussed N = 14 Fall N = 17 Spring			Grades 1 & 2 Counterparts N = 23 Fall N = 16 Spring			Experimental Grade 1 Classes N = 73 Fall N = 76 Spring			Control Grade 1 Classes[c] N = 32 Fall N = 49 Spring			Experimental Grade 2 Classes N = 95 Fall N = 100 Spring			Control Grade 2 Classes[c] N = 55 Fall N = 66 Spring		
		LL	M	UL	LL	M	UL	LL	M	UL	LL	M	UL	LL	M	UL	LL	M	UL
(1)	100	--	0	--	--	0	--	--	0	--	--	0	--	--	0	--	--	0	--
	67	-2	47	96	-4	32	69	-2	19	39	24	56	89	19	38	56	-17	6	30
Fall	33	38	89	140	-4	33	69	28	49	70	43	76	109	37	56	74	3	27	50
	0	9	58	107	-5	42	79	2	23	43	51	85	118	33	51	69	-7	17	40
	100	--	0	--	--	0	--	--	0	--	--	0	--	--	0	--	--	0	--
	67	-33	11	55	-53	-09	35	-3	17	37	-15	10	35	23	42	60	-31	-10	12
Spring	33	1	45	89	-42	2	45	16	36	56	-8	17	42	67	86	105	4	17	39
	0	45	91	137	-19	25	68	1	21	41	-1	24	49	74	93	112	-26	-5	17
(2)	100	--	0	--	--	0	--	--	0	--	--	0	--	--	0	--	--	0	--
	67	-27	25	77	-44	-6	32	-17	4	24	-21	9	40	9	28	46	-3	20	44
Fall	33	83	142	201	16	54	92	8	29	50	-18	13	43	51	70	89	16	40	64
	0	61	117	174	42	82	121	0	20	41	-39	-8	23	57	76	95	-11	12	36
	100	--	0	--	--	0	--	--	0	--	--	0	--	--	0	--	--	0	--
	67	-41	2	44	-104	-58	-13	-17	3	23	20	46	72	-4	14	31	18	41	63
Spring	33	-11	31	74	-79	-35	10	27	47	68	16	41	67	51	69	88	69	93	116
	0	-57	-14	28	-94	-49	-4	13	33	53	16	42	67	39	57	75	49	72	95

Table 9 (Continued)

Discrimination[b]	% Black	95 Percent Confidence Intervals: Grades 1 & 2 Bussed N = 14 Fall N = 17 Spring			Grades 1 & 2 Counterparts N = 23 Fall N = 16 Spring			Experimental Grade 1 Classes N = 73 Fall N = 76 Spring			Control Grade 1 Classes[c] N = 32 Fall N = 49 Spring			Experimental Grade 2 Classes N = 95 Fall N = 100 Spring			Control Grade 2 Classes[c] N = 55 Fall N = 66 Spring		
		LL	M	UL	LL	M	UL	LL	M	UL	LL	M	UL	LL	M	UL	LL	M	UL
(3)	100	--	0	--	--	0	--	--	0	--	--	0	--	--	0	--	--	0	--
Fall	67	-9	38	86	21	59	97	-19	1	22	89	127	165	-23	-6	12	-20	3	27
	33	21	70	119	13	51	89	-14	6	26	97	136	175	2	20	38	-31	-8	16
	0	-15	33	81	26	65	103	-16	4	24	148	190	232	-19	-2	16	-37	-13	10
Spring	100	--	0	--	--	0	--	--	0	--	--	0	--	--	0	--	--	0	--
	67	-194	-138	-82	-44	0	44	-25	-5	15	9	34	59	-33	-15	2	-31	-10	12
	33	-42	4	50	6	51	96	2	22	42	8	33	58	-38	-20	-3	-51	-30	-8
	0	-60	-14	33	0	45	89	-5	15	35	19	44	70	-68	-43	-25	-62	-40	-18

[a]Affective values for the various racial mixes are scaled in relation to the 100% black picture having a point value = 0.

[b]The discriminations were (1) Which class would you rather be in? (2) Which class do you think is smarter? (3) Which class do you think gives the teacher more trouble?

[c]The control classes used here contained only white Suburbia students.

Table 10

Mean Number of Problems Checked by

Suburban Teachers

	Experimental Class Teachers		Control Class Teachers	
	Pre	Post	Pre	Post
Grade 1	15.40	19.00	31.67	37.33
Grade 2	29.00	40.40	42.75	52.25